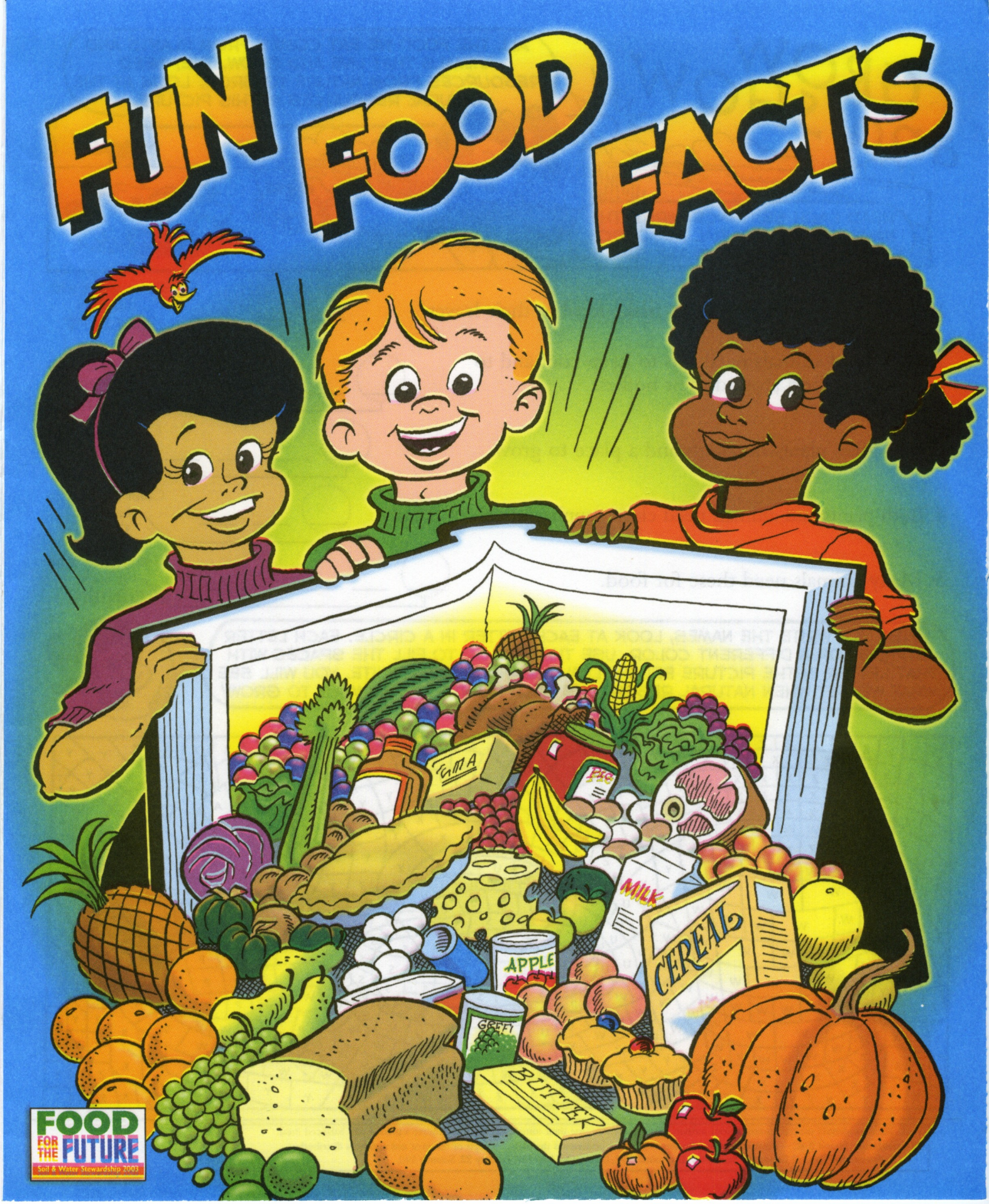

FUN FOOD FACTS
MILK
CEREAL
APPLE
BUTTER
FOOD FOR THE FUTURE
Soil & Water Stewardship 2003

GROW and SHOW

1. Plants use light from this to make food in their leaves. ___ ___ ___ Color spaces with this letter **YELLOW**.

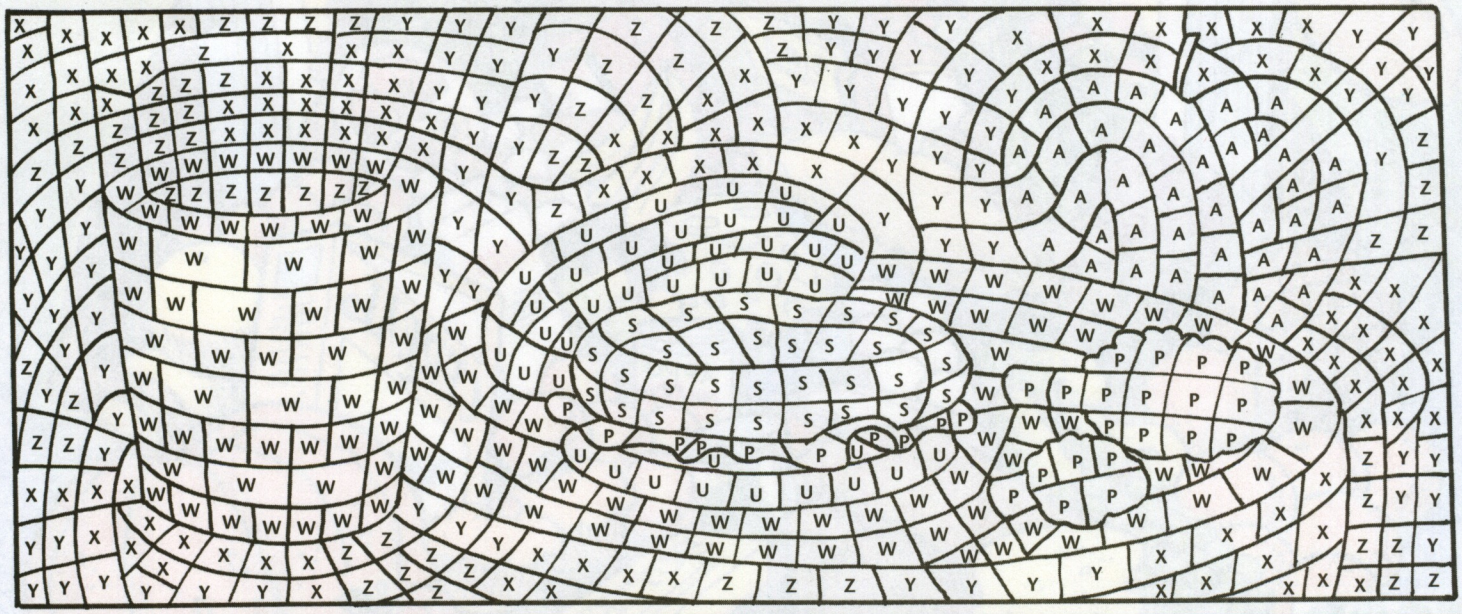
2. Plants and animals need this to keep cool and to move food around their bodies. ___ ___ ___ ___ ___ Color spaces with this letter **BLUE**.

3. This gives plants nutrients and a place to grow. ___ ___ ___ ___ Color spaces with this letter **BROWN**.

4. Both plants and animals need clean supplies of this to breathe. ___ ___ ___ Color spaces with this letter **RED**.

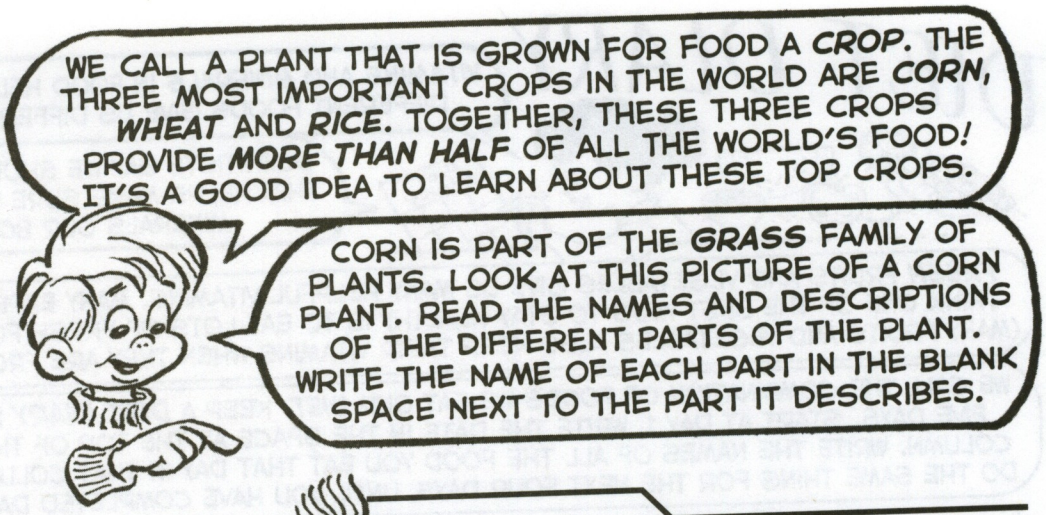
5. Many animals need these for food. ___ ___ ___ ___ ___ Color spaces with this letter **GREEN**.

AFTER YOU WRITE THE NAMES, LOOK AT EACH LETTER IN A CIRCLE. EACH LETTER STANDS FOR A DIFFERENT COLOR. USE THAT COLOR TO FILL THE SPACES WITH THAT LETTER IN THE PICTURE BELOW. LEAVE BLANK SPACES WHITE. YOU WILL SEE WHAT WE GET WHEN NATURAL RESOURCES HELP PLANTS AND ANIMALS TO GROW!



Goal: Readers identify natural resources from written descriptions, then use their initials as a key to complete a picture of a balanced meal.
EE Standards: Strand 2.4C – Environment and Society – Learners understand the basic concepts of resource and resources distribution.
Reference to National Education Standards: Economics 1-2, Geography 136-137, History 22, Science 140.

THE TOP CROPS



Roots - Hold plant in the ground and get minerals from soil.

Stalk - Holds leaves up so they can reach sunlight.

Leaf - Uses sunlight, water and air to make food for the plant.

Ear - A group of seed kernels on a cob, covered by a husk.

Silk - Part of the female flowers on a plant, this sticks out from the top of the husk on each ear.

Kernel - Each one of these on an ear is a seed which holds a new baby plant.

Tassel - Male flowers at the top of the cornstalk, whose pollen must reach the female flowers lower on the stalk so they can form kernels.

1. _____
2. _____
3. _____
4. _____
5. _____

Goal: Readers identify and label parts of a corn plant. They choose one common food crop and list five foods made from it.
EE Standards: Strand 2.2B – Heredity – Learners identify some basic traits of plants. Reference to National Education Standards: Science 127-29, Science Benchmarks 107-123.

DIET DIARY

VITAMINS AND MINERALS IN FOOD HELP US GROW AND STAY HEALTHY. DIFFERENT FOODS GIVE US DIFFERENT VITAMINS AND MINERALS.

SCIENTISTS SAY WE SHOULD EAT A VARIETY OF FOODS. THIS HELPS MAKE SURE WE GET ALL THE VITAMINS AND MINERALS OUR BODIES AND MINDS NEED.

FRESH FRUITS AND VEGETABLES GIVE US MANY HELPFUL VITAMINS. MANY EXPERTS THINK ONE OF THE BEST WAYS TO STAY HEALTHY IS TO EAT LOTS OF FRESH FOOD! (MANY FRUITS AND VEGETABLES ALSO KEEP THEIR VITAMINS WHEN THEY ARE FROZEN.)

WE CALL THE COMBINATION OF FOODS WE EAT OUR DIET. KEEP A DIET DIARY FOR FIVE DAYS. START AT DAY 1. WRITE THE DATE IN THE SPACE AT THE TOP OF THE COLUMN. WRITE THE NAMES OF ALL THE FOOD YOU EAT THAT DAY IN THAT COLUMN. DO THE SAME THING FOR THE NEXT FOUR DAYS, UNTIL YOU HAVE COMPLETED DAY 5.

Day 1 _____ Date	Day 2 _____ Date	Day 3 _____ Date	Day 4 _____ Date	Day 5 _____ Date
Foods Eaten	**Foods Eaten**	**Foods Eaten**	**Foods Eaten**	**Foods Eaten**

AT THE END OF FIVE DAYS, LOOK AT YOUR DIET, THEN ANSWER THESE QUESTIONS. YOU MAY WANT TO ASK AN ADULT TO HELP YOU REVIEW YOUR DIET.

1. Which food did you eat most often? _____
2. What fresh foods did you eat? _____

_____

3. Pick five foods you ate and list the plants or animals they came from. _____

_____ _____

_____ _____

4. Do any plants or animals that make food in your diet grow on a farm or ranch near you? If so, list them here.

_____

5. Do you think your diet contains a good variety of foods? _____
6. Do you think you should adjust your diet by eating more or less of certain foods? If so, list the foods, and tell whether you should eat more or less of them. _____

_____

Goal: Readers observe and record their own eating habits for five days, then analyze their diet to determine its composition, component food crops, origin and degree of variety.
EE Standards: Strand 1.1C – Questioning and Analysis Skills – Learners are able to locate and collect information. References to National Education Standards: Arts 31, English Language Arts 27-29, 38-39, Geography 46, 106-107, History 22, Mathematics 51-53, Science 122, Social Studies 35. Strand 1.1G – Questioning and Analysis Skills - Learners can summarize information and use models and examples to explain their thinking. References to National Education Standards: English Language Arts 38-39, Geography 48-49, History 22, Mathematics 29-31.

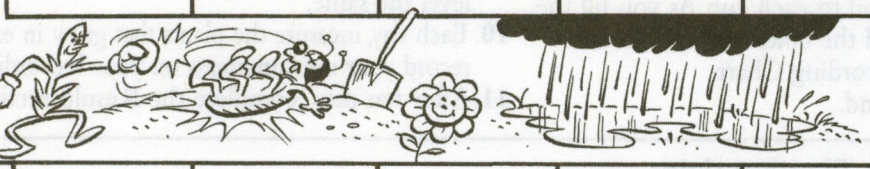
The GROWING GAME

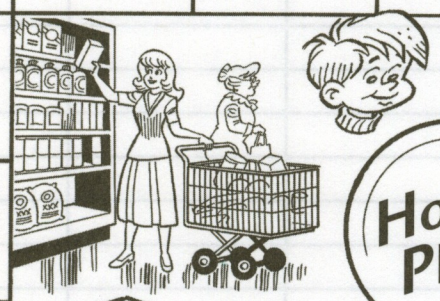
MANY PEOPLE WORK HARD TO BRING US FOOD. FARMERS PLANT, GROW AND HARVEST FOOD CROPS. OTHER PEOPLE PROCESS AND PACKAGE FOOD. STORES DISPLAY AND SELL FOOD. TRUCKS, TRAINS AND CARS MOVE FOOD EVERY STEP OF THE WAY, FROM THE FIELD TO YOUR TABLE.

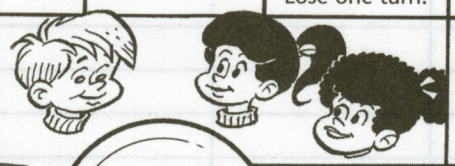
THERE ARE RISKS AND REWARDS AT EVERY STEP IN GROWING AND SELLING FOOD. THIS GAME SHOWS SOME OF THE CHALLENGES FACED BY THE PEOPLE WHO BRING US FOOD. AS YOU PLAY, TRY TO DECIDE WHICH CHALLENGES PEOPLE CAN CONTROL, AND HOW THEY CAN CONTROL THEM.

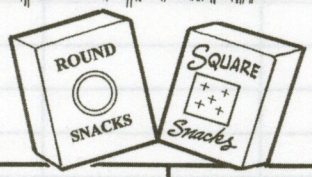
DIRECTIONS: You can play by yourself or with others. Each person uses a different coin or a different kind of dried bean as a marker. You will need a die from a pair of dice to tell you how many spaces to move. To begin, each person rolls the die. The person with the highest number goes first. Then other players take turns, in a clockwise direction. Each player rolls the die to see how many spaces to move. When you reach a space, read and follow the directions there. Each player must try to reach Home Plate. If two or more people play, the first player to reach Home Plate wins.

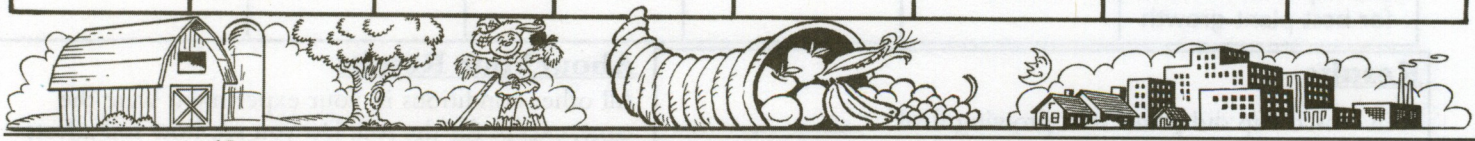
Start	Special new type of seed resists insect damage. Move ahead 2.	New seed supplies costs more. Lose one turn.		Soil conditions are just right for planting. Move ahead 3.	Soil is too wet for planting. Go back 2.	No rain for three weeks. Go back to Start.
Fancy package costs a lot, raises price. Go back 1.	Price of gasoline rises, raises cost of moving food. Go back 2.	Stores put snacks in front of store. Move ahead 1.		Stores put snacks on bottom shelf in back of store. Lose one turn.	People love new snacks! Roll again.	Gentle rains help crops sprout and grow. Move ahead 4.
					Good package helps food stay fresh on shelf longer. Move ahead 1.	Swarm of aphids attacks crops. Go back 2.
Fancy package helps sell more snacks! Roll again.						Swarm of ladybugs eats aphids before they damage crops. Move ahead 2.
Kids like square snacks, not round ones made from crop. Go back 1.						Record hot weather and no rain for three weeks. Lose one turn.
	New machine makes fun round snacks from crop! Move ahead 1.	While in storage, crop infested by weevils! Lose one turn.	Crop surplus means low price for crop. Go back 4.	Good price for crop! Move ahead 4.	Too much rain spoils half of crop before harvest. Go back 2.	New equipment harvests crop faster and better. Roll again.











THE REAL PROCESS OF GROWING AND SELLING FOOD IS MUCH MORE TRICKY AND COMPLICATED THAN THIS GAME! CAN YOU THINK OF OTHER CHALLENGES FACED BY THE PEOPLE WHO BRING US FOOD?

Goals: In a group or individually, readers navigate a board game where advances and setbacks are indicative of challenges in growing, processing and distributing food.
EE Standards: Strand 2.4D – Environment and Society – Learners identify important technological systems, such as agriculture, transportation, and manufacturing.
Reference to National Education Standards: History 37-38, Science 140, Science Benchmarks 54-55, 184-185, 188-189, 193,197-198, 201-202, 205.

SUPER SOIL

SOIL IS *AMAZING!* IT CONTAINS BITS OF MINERALS, PIECES OF DEAD PLANTS AND ANIMALS, AND MANY TINY *LIVING* ORGANISMS. OUR LIVES DEPEND ON GOOD *FOOD*, AND GOOD FOOD DEPENDS ON GOOD *SOIL!* THIS FUN ACTIVITY SHOWS YOU HOW SOIL HELPS THINGS GROW.

You will need:

- Five paper cups
- Sand
- A small ruler
- A tray (or dish) in which to place the cups
- Tomato, lettuce or alfalfa seeds

Prepare and conduct your experiment

1. Label the cups with numbers from 1 to 5.
2. Poke several small holes in the bottoms of cups 1 to 4.
3. Gather soil samples for cups 1 to 3. Choose three different kinds of soil from three different areas. For example, you might gather some from under a pine tree, in the woods, in a field or a lawn. Fill each of the three cups two-thirds full with soil – one kind of soil to each cup. As you fill the cups, observe the soil. Record the color and texture of each soil sample on your Recording Chart.
4. Fill cup 4 two-thirds full of sand.
5. Fill cup 5 two-thirds full with water.
6. Plant several seeds each in cups 1, 2, 3 and 4. Cover them lightly with the soil or sand. Drop several seeds in cup 5.
7. Place all the cups in the tray. Place the tray in a sunny window.
8. Gently water cups 1 to 4.
9. For the next ten days, gently water cups 1 to 4 once a day. Add a little water to cup 5 each day to keep the water level the same.
10. Each day, measure the plants that grow in each cup and record your measurements on your Recording Chart.
11. After ten days, complete the Results section.

Recording Chart

Planting date: _____

	Cup 1	Cup 2	Cup 3	Cup 4 (sand)	Cup 5 (water)
Where soil sample taken					
Soil texture					
Soil color					
Date seeds sprouted					
Height of plant – (after sprouting) Day 1					
Day 2					
Day 3					
Day 4					
Day 5					
Day 6					
Day 7					
Day 8					
Day 9					
Day 10					
Rank cups from 1 to 5 for best plant growth					

Results

1. In which cup did plants start growing first? _____
2. In which cup did plants grow tallest? _____
3. In which cup did plants grow least? _____

About Your Results

All other conditions in your experiment were the same, except for the soil. Do you see how soil affects plant growth? Farmers are always working to protect and improve soil resources. The next time you eat good food, remember the **super soil** in which it grows!

Goal: Readers set up, conduct, observe and record the results of an experiment to determine plant growth in different mediums, including different kinds of soil.
EE Standards: Strand 2.2C – The Living Environment – Learners identify ways in which an organism is related to its environment, and how these relationships may be helpful or harmful to particular organisms. References to National Education Standards: Geography 132, Science 129, Science Benchmarks 116.

FOOD FIGURES

The number of people in an area is called its **population**. The population of the United States and of the world keeps growing. The current population of the United States is about 265 million (265,000,000) people.

In the United States, fewer people work as farmers than in our past. Two hundred years ago, 80 of 100 working people in the United States were farmers. Today, around 3 in 100 working people are farmers.

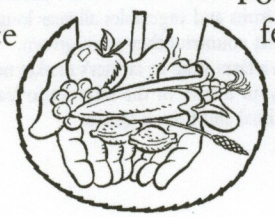
Less land is farmed today than 50 years ago. In 1950, about one billion two hundred million (1,200,000,000) acres were farmed. Today, about two hundred and fifty million (250,000,000) fewer acres are farmed.

Fewer farmers work on less land, yet we have enough food. New machines and better ways of growing help farmers grow more food. Farms give us almost twice as much food as they did in 1950. One hour of farm work produces about eight times as much food today as it did in 1950.

In 1950, one farmer fed about ten people. Today, the work of one farmer feeds **ten times** as many people. So, fewer people can produce more food.

Our way of life in the United States helps farmers feed us all. People can quickly share new ideas. When farmers grow more food, they can make more money. They can buy new machines. Scientists and farmers learn to take care of soil and water, to keep farmland healthy. And we are free to choose government leaders who work to make our food supply better.

In 1987, about five billion (5,000,000,000) people lived in the world. Today, there are about six billion (6,000,000,000). Experts think the world population will grow by another one billion people by the year 2013.



Food from United States farms will help feed the world in coming years. Sharing the ideas and tools that make our farm system work will also help other countries feed themselves.

(Sources: U.S. Department of Agriculture, U.S. Commerce Department, American Farm Bureau Federation)

Questions

1. About how many acres of land are used for farming today in the United States? _____ acres

2. If one hundred hours of farm work produced 100 tons of corn in 1950, about how many tons of corn would the same work produce today? _____ tons

3. How many people does the work of one farmer feed today? _____ people

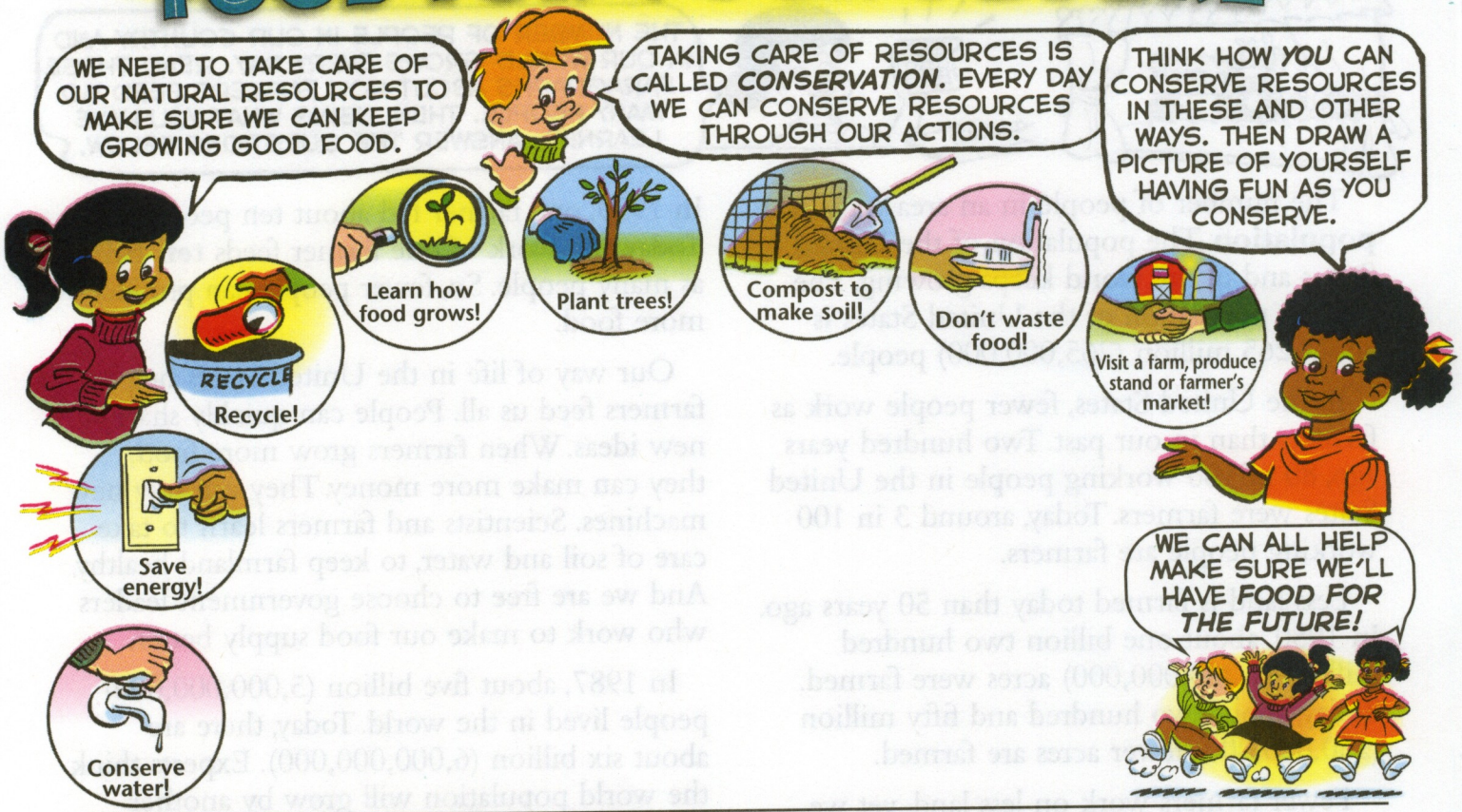
4. Out of 1,000 people working today, about how many are farmers? _____ people

5. About how many people will live in the world in 2013? _____ people

Goal: Readers analyze figures in a written paragraph regarding world population, U.S. agricultural productivity and food supply, then use those figures to solve a series of math problems.
EE Standards: Strand 1.1G – Questioning and Analysis Skills-Learners summarize information and use basic mathematics to analyze data. Reference to National Education Standards: English Language Arts 38-39, Geography 48-49, History 22, Mathematics 29-31.

Answers:
1. 950,000,000 acres 2. 800 tons
3. 100 people 4. About 30 people
5. 7 billion, or 7,000,000,000 people.

FOOD FOR YOUR FUTURE



HERE ARE MORE FUN FOOD ACTIVITIES!

- In the past, a lot of food was spoiled or eaten by pests. Draw and describe at least three different ways we protect food from spoilage and pests today.
- Learn about the "Food Pyramid." This diagram shows the amounts of different foods experts recommend that people eat. Compare your observations from your "Diet Diary" to the Food Pyramid.
- Modern transportation lets us have fresh fruits and vegetables all year long. In winter, visit a supermarket and look closely at the fruits and vegetables. Check the labels to see in what countries they were grown.
- Learn what crops are grown near you. Visit a farm store or farmer's market near you. Compare the food there with the food in a supermarket.
- Choose one of your favorite foods. Use your library or the internet to learn about the plants or animals from which it is made. Draw a picture showing one plant or animal and how it grows.

Available from your local conservation district, state natural resources agency and the

National Association of Conservation Districts
408 East Main P.O. Box 855 League City, TX 77574-0855
1-800-825-5547, ext. 32 www.nacdnet.org

NOTE TO EDUCATORS: Each activity was developed with an educational goal in mind that should be adapted to the needs of the grade level you are teaching. Also, each activity is correlated to environmental education standards established by the North American Association of Environmental Education, as outlined in the book **Excellence in EE – Guidelines for Learning (K-12)**. Note that each guideline includes references to national education standards that form the basis for the state standards you follow. The goal and standards are listed at the bottom of each activity.

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